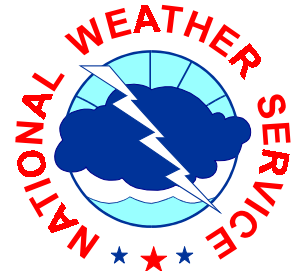


**NATIONAL WEATHER SERVICE  
WESTERN REGION  
SALT LAKE CITY, UTAH**



**FEBRUARY 19, 2002**

**REGIONAL DIRECTOR**

Ken Mielke, MIC WFO Great Falls, received a plaque and a certificate signed by the Governor of Montana Judy Martz, the Adjutant General for Military Affairs in Montana Major General Gene Prendergast, and State DES Administrator Jim Greene. These three offices make up the "triad" for Emergency Management in Montana.

The presentation was made before a full house of County Commissioners and Emergency Managers at the Governor's luncheon during the Governor's Conference for Emergency Management. Jim Greene specifically mentioned how the relationship between NWS and DES has grown by leaps and bounds during Ken's tenure as MIC in Great Falls. It's quite an honor to receive an award like that in front of the customers one serves.

**DEPUTY REGIONAL DIRECTOR**

**Weather Support Group Provides Weather Support to the Olympics:**

The Weather Support Group, a partnership between the National Weather Service, KSL Television, and the University of Utah is in the second week of supporting the 2002 Winter Olympic Games. Forecasters from the NWS and the private sector have been working cooperatively to provide excellent weather forecasts for the Games. A few of the mountain venues have had some weather delays mainly because of winds. The team provided the Salt Lake Organizing Committee and the venue operators with 24-hour notification that winds might be a problem for some of the events. It is the first time in Olympic history that a partnership between government, private sector, and academia has been used to provide weather support and so far the partnership has been highly successful.

**METEOROLOGICAL SERVICES DIVISION**

**STATEMENT OF THE WEEK:** This week's statement of the week is a dense fog advisory written by lead forecaster Gary Sanger of WFO San Joaquin Valley. The product verified with over a 17-hour lead time, and was broadcast by the Traffic Management Unit to patrol units and to local media outlets in the area. Unfortunately, the dense fog contributed to two multi-car pile-ups with three

February 19, 2002

2

fatalities.

WWUS45 KFAT 042129

NPWFAT

URGENT - WEATHER MESSAGE  
NATIONAL WEATHER SERVICE HANFORD CA  
130 PM PST MON FEB 4 2002

CA089>92-050600-

WEST CENTRAL SAN JOAQUIN VALLEY-EAST CENTRAL SAN JOAQUIN VALLEY-  
SOUTHWESTERN SAN JOAQUIN VALLEY-SOUTHEASTERN SAN JOAQUIN VALLEY-

...A FROST ADVISORY IS IN EFFECT TONIGHT FOR THE CENTRAL AND  
SOUTHERN SAN JOAQUIN VALLEY...

...A DENSE FOG ADVISORY IS IN EFFECT FOR THE CENTRAL AND SOUTHERN  
SAN JOAQUIN VALLEY FROM 4:00 AM TO 10:00 AM TUESDAY MORNING...

MINIMUM TEMPERATURES WILL AGAIN RANGE FROM 28 TO 35 DEGREES  
THROUGHOUT THE CENTRAL AND SOUTHERN SAN JOAQUIN VALLEY TONIGHT.  
TEMPERATURES WILL BE BELOW 32 DEGREES FOR 3 TO 6 HOURS IN THE  
COLDEST LOCATIONS.

PRECAUTIONS SHOULD BE TAKEN TO PROTECT TEMPERATURE SENSITIVE  
PLANTS...LIVESTOCK...AND PETS.

AREAS OF DENSE FOG WILL REDEVELOP DURING THE EARLY MORNING  
HOURS...AND WILL BE MOST WIDESPREAD DURING THE TUESDAY MORNING  
COMMUTE. THE DENSE FOG WILL BE MOST PREVALENT IN...BUT NOT LIMITED  
TO...EASTERN MERCED COUNTY...AND FROM FRESNO SOUTH THROUGH HANFORD  
AND VISALIA. HIGHWAYS AFFECTED WILL INCLUDE 41...43...99 AND 198.

THE DENSE FOG IN COMBINATION WITH LOW TEMPERATURES MAY PRODUCE  
AREAS OF BLACK ICE...ESPECIALLY ON BRIDGES AND OVERPASSES. SLOW  
DOWN AND LEAVE A SAFE BRAKING DISTANCE BETWEEN YOU AND THE VEHICLE  
AHEAD OF YOU.

BE ESPECIALLY CAUTIOUS IN AND NEAR SCHOOL ZONES. WATCH FOR  
FLASHING YELLOW OR RED SIGNALS ON SCHOOL BUSES...AND WATCH FOR  
CHILDREN WAITING FOR SCHOOL BUSES IN THE FOG.

STAY TUNED TO NOAA WEATHER RADIO...OR YOUR FAVORITE NEWS  
SOURCE...FOR FURTHER UPDATES ON THIS FROST AND DENSE FOG SITUATION.  
\$\$

OR VISIT OUR WEBSITE AT [WWW.WRH.NOAA.GOV/HANFORD](http://WWW.WRH.NOAA.GOV/HANFORD)

SANGER

**SCIENTIFIC SERVICES DIVISION**

**Required COMET Numerical Weather Prediction (NWP) Module for all Western Region (WR) Forecasters - Completion by March 31, 2002:**

Forecasters can improve their forecasts by making more intelligent use of NWP model guidance. Numerical models are changing and it is important that forecasters keep up with model improvements. The COMET Program has recently released a set of NWS-sponsored training modules on NWP fundamentals. These Web-based modules are now organized as an on-line, distance learning course with the goal of providing forecasters a better understanding of numerical model fundamentals.

In completing the NWP Distance Learning Course, you can either choose to go through each element of each module (recommended for interns or others unfamiliar with NWP or those highly interested in the topic), or you may choose to go through the minimum path required for each module. The minimum path has been defined, with guidance from NWS personnel, as the core material experienced forecasters will find most beneficial in refreshing their understanding of NWP. The minimum required sections and pages are highlighted within each of the modules.

Upon completing the course, you will be asked to take a short on-line exam based on the example questions in the course modules. Successful (75% passing score) participants will be issued a certificate, and an email will be sent to the local office (SOO or MIC).

The modules build upon information presented in the previous modules. We recommend that you complete the modules in a short time frame, within 2-4 weeks, if possible. However, because the modules can be demanding, do not try to take more than one module per day. The total time to complete the course will likely fall between 10 and 16 hours.

Western Region is requiring successful completion of this course (a certificate) by all WR forecasters as part of their professional development and training activities. This includes all Forecast Office meteorologists and interns, CWSU meteorologists, and the River Forecast Center HAS positions. **The due date is March 31, 2002.**

The on-line Web course can be found at:

<http://meted.ucar.edu/nwp/course>

The Operational Models Matrix, an information resource on current model configurations, can be found at:

<http://meted.ucar.edu/nwp/pcu2/index.htm>

**CAFTI Meeting Summary:** Below is a brief summary of the February 12, 2002, CAFTI Meeting. The agenda included four information items (requiring no vote) and one action item (requiring a vote for implementation, which was approved in this case).

As always, please take a look at the CAFTI page for more detailed information on the presentations and Technical Procedure Bulletins

<http://205.156.54.206/om/tpb/cafti.htm>

Crisis Change to Eta 2m Temperature Bias Fix (Information Item - Crisis Implementation - Requires No Vote)

In response to large 2m temperature cold bias affecting areas in the model with snow cover.

Caused by a drastic drop in skin temperature of snow at night - in cloud free scenarios with little wind (drags the 2m temperatures down with it)

Changes made to land/sfc model - impacting only the cold bias in the skin temperatures and 2m temperatures (little or no impact elsewhere in the model)

Tested using Eta 32 control runs (stats for Western Region sites are available in Geoff's presentation)

**These changes should also improve both the surface temps in the Eta 12 km and Eta 10 km (HRW) surface temperatures!**

**Expected to be implemented ASAP**

Upgrade to the Eta HiResWindow/10 km Eta threats runs (Information Item)

Increase in resolution from 10 km to 8 km

50 levels to 60 levels

Domains and delivery times virtually the same.

**HRW Upgraded to a non-hydrostatic, hybrid sigma-theta vertical coordinate version of the Eta. This is a big step towards the WRF!**

Added the capability for on-demand support of HYSPLIT model (for Homeland Defense) using a special 4 km run of the non-hydrostatic Eta model - much in the same way that hurricane support is now done (This is available now).

***March 2002 implementation***

Update on the Implementation of the 20 km RUC (Information Item)

Increase in resolution to 20km/40 levels

3DVAR, hydrometeor analysis w/ GOES, raw observation (instead of interpolated)

Intermittent 1-hr cycle

Upgrades to the physics and parameterization schemes:

    New microphysics package (shorter time-step)

    New Grell scheme with ensemble cloud, shallow convection, detrainment of cloud water to microphysics scheme

    Burk-Thompson turbulence package

    MM5 radiation scheme with a fix for sw radiation lag error

    2-layer snow model, improved cold season processes, improved diurnal cycle

    High resolution USGS land-use/soil type, albedo

Eta model boundary conditions every 6 hr

Increase in output frequency

    Hourly output to  $\geq 9$  hrs, 12 forecast every 3 hr.

Implementation targeted for **March 2002**

Field evaluation/testing **February 2002** (supported through AWIPS)

For more information on the implementation, please see the 20 km RUC Development page at:

[http://ruc.fsl.noaa.gov/ppt\\_pres/20kmRUC-dec01\\_files/v3\\_document.htm](http://ruc.fsl.noaa.gov/ppt_pres/20kmRUC-dec01_files/v3_document.htm)

Update on Eta-Based MOS guidance (Information Item)

First phase (*available now*)

    Guidance out to 60 hours (3 hrly, 12 hrly)

    Limited weather elements (limited predictors)

        max/min temp, temp, dwpt, wind direction and speed, PoP/QPF, total sky cover, thunderstorms/SVR WX

    Limited spatial coverage

    Alpha numeric/BUFR products

Verified at ~ 300 sites in all regions  
Cool Season (97',98',99')

Warm Season (97',98',99',00')

For most fields comparable to AVN products; some better,  
some worse. All-in-all, definitely better than NGM MOS  
Especially QPF!

Implementation of the Coastal Ocean Forecast System - COFS (Action  
Item - Approved)

First real-time 3-D operational numerical ocean forecast model  
in civilian sector of U.S.

Forecast physical conditions of the coastal oceans in real-  
time

Provide mariners information for ship routing in a safe and  
economic manner

Provide water levels and currents to NOS bay and estuary  
models

Provide initial conditions to environmental hazard models

**Western Atlantic Domain only**

Not a coupled ocean-atmosphere system

Development underway for a coupled system

Current Users

NCEP/MPC and TPC

Output is not available in AWIPS (yet)

**Plans for deployment over East Pacific (Western Region) within  
the next 2 years.**

***Implementation: Spring 2002***

## **SYSTEMS OPERATIONS DIVISION**

**Observing Program Conference:** This regional workshop is scheduled to  
be held in Las Vegas, Nevada from April 29 to May 3, 2002.  
Proposed agenda items for the conference are due to Harold Knocke  
in SOD by February 27,2002.

**Regional Graphical Forecast Editor (GFE) Development System IP  
Addresses:** We recently received approval for an AWIPS request for  
change submitted for IP addresses to connect the regional GFE  
development systems provided by SSD to AWIPS. GFE is a Forecast  
Systems Lab developed application for displaying and editing

gridded forecast data.

**Replacement NWR Transmitters:** Four NWR replacement transmitters (Armstrong) have been ordered for Western Region NWR sites in California: Los Angeles (2), San Francisco (1), and Eureka (1).

**First USDA-funded NWR in Western Region:** A crown transmitter has been ordered for the Baker, MT, USDA NWR. This is the first site in Western Region funded by USDA. Installation is planned for mid-March.

**SANS Security Training Reminder:** This is another reminder for those systems administrators enrolled in the SANS on-line IT security course that the course completion dates are coming up soon. There are 37 modules/quizzes to complete.

**Status of AWIPS 5.1.2 Upgrade:** Sixteen sites in Western Region have completed the AWIPS 5.1.2 upgrade. All but one site will have completed the upgrade by the end of February. The remaining site will complete the upgrade by mid-March.

**ASOS: Processor Upgrade, Dewpoint Replacement Sensor, Software Version 2.6A:** The processor Upgrade with version 2.6A software and the dewpoint replacement sensor are scheduled to be installed at Campo (CZZ), CA this week. The dewpoint replacement sensor is scheduled to be installed at Boise (BOI), ID this week. There are still a few problems with the new software that have not been resolved. Until these problems are resolved, there will be no further installations at staffed ASOSs.

**RADAR: The Open Radar Product Generator (ORPG):** The ORPG will be installed at Los Angeles, CA the week of February 18, 2002. The next ORPG installation is not scheduled until the week of March 11, 2002.

**National Directives System (NDS):** A new directives system is being developed that will replace the current system of Weather Service Operations Manual (WSOM) Chapters, OMLs, and ROMLs. Information about the new system is located at the following web address:

[www.nws.noaa.gov/directives/](http://www.nws.noaa.gov/directives/)

All WSOM Chapters, OMLs, and ROMLs must be converted to the new NDS format no later than September 30, 2002. An added feature to NDS is that field offices may now issue ROMLs (called supplements under NDS) to document procedures in their areas of operation.